

REMARKS/ARGUMENTS

35 U.S.C. §112, First paragraph Rejection: Claims 1-25, 32, and 33

Claims 1-25, 32, and 33 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Regarding independent claims 1 and 13, the Examiner contends that there is no support in the originally filed disclosure for the limitations of the last 4 lines of each claim.

It should be noted that no evidence is provided in the Office Action as to why those skilled in the art would conclude that the specification fails to convey with reasonable clarity to those skilled in the art that, as of the filing date sought, applicant was in possession of the invention as now claimed. For at least this reason, the Applicants' contend that the rejection is improper.

Regarding claims 32 and 33, the Examiner contends there is no support for the particularly claimed sweet spot location.

To the extent the rejections are proper, Applicants respectfully traverse the rejections of Claims 1-25, 32, and 33 under 35 U.S.C. §112, first paragraph and the following arguments are presented.

Written Description Requirement

Before setting forth a discussion of the above described rejections set forth in the Office Action, a review of the controlling case law may be helpful. The courts have developed the following objective standard for determining compliance with the written description requirement:

"does the description clearly allow persons of ordinary skill in the art to recognize that he or she invented what is claimed."¹ When determining if a specification complies with the written description requirement, the fundamental factual inquiry is whether the specification conveys with reasonable clarity to those skilled in the art that, as of the filing date sought, applicant was in possession of the invention as now claimed.²

Claims 1 and 13

The majority of the limitations contained in claims 1 and 13 are in their originally filed form, and thus, should not be at issue for the above described rejection. The rejection appears to be based solely on the following claim limitation added to claims 1 and 13 through amendment:

wherein at least two of (a) the density of said first portion, (b) the density of said second portion, (c) the location of said first portion, and (d) the location of said second portion are selected to provide for a bat having a sweet spot zone located between a predefined first-point and a predefined second-point.

[Applicants' Application: Claim 1, last four lines]

wherein at least two of (a) the density of said first portion, (b) the density of said second portion, (c) the density of said third portion, (d) the location of said first portion, (e) the location of said second portion, and (f) the location of said third portion are selected to provide for a bat having a center of mass located at a predefined point from the barrel end of the bat.

[Applicants' Application: Claim 13, last four lines]

The Applicants' respectfully traverse the grounds for rejection of claims 1-25, 32, and 33 and contend the claims as previously presented are supported by the specification and thus such specification does comply with the written description requirement. Indeed, the specification provides a detailed description as to why one would want to engineer the weight distribution of a

¹ In re Gosteli, 872 F.2d 1008, 1012, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989).

² Vas-Cath, Inc. v. Mahukar, 935 F.2d 1555, 1563-64, 19 USPQ2d 111, 1117 (Fed. Cir. 1991).

bat in the novel ways described in the Applicants' specification. The specification provides even more details as to how such engineering is accomplished.

First, the written description describes a primary object of the invention as follows:

It is a principal object of the present invention to provide solid laminated bats having the well-known handle/barrel shape, but with a variety of pre-selected weight distributions. It is another principal object of the present invention to provide such bats having a variety of weight distributions while maintaining a particular shape and a particular overall weight for the bat. The disclosed technology provides for a bat that is designed with a generic bat shape (such as a bat consisting of a handle and a barrel where the handle has a smaller diameter than the barrel) that offers greater flexibility in changing the bat's weight distribution.

It also is a principal object of the present invention to provide a method of making a bat that will enable a bat's weight distribution to be varied so as to optimize the energy transfer to the ball based on the way the batter anticipates that the bat will be swung and the way the batter anticipates that the pitcher will throw the pitch. [Applicants' application: P3, L1-L13] [Emphasis added]

The specification clearly states a goal of varying the weight distribution of a bat according to predefined parameters. Indeed, the majority of the specification is devoted to describing a "bat" apparatus, and a method of making such an apparatus, having a variety of weight distributions by constructing a bat having at least two portions, where, for example, the density of the first portion, the density of the second portion, the location of the first portion, and the location of the second portion are selected to provide for a bat having a sweet spot zone (and center of mass) located between a predefined first-point and a predefined second-point.

For example, the specification teaches the following:

The present technology allows the location of wood of greater density in the portions of the bat that are anticipated to contact the ball during the batter's intended swing at desired pitches to hit. Such technology allows for a bat design that is better tailored to the batter's specifications. [Applicants' Application: Page 8, L19-L22]

Thus, the specification clearly teaches a goal of varying a bat's weight distribution according to predefined specifications and provides at least one method of achieving such a goal. The specification further teaches:

Notably, for a presently preferred embodiment described above, each of the first and second barrel portions (40, 42) is the same *size* and adjacent to each other. It will be appreciated, however, that such barrel portions (40, 42) may run the length of the barrel or only part of the length of the barrel. In addition, such portions (40, 42) may be *different in length and width and height* [i.e. difference sizes], and such barrel portions (40, 42) *may or may not be adjacent to each other* [i.e. the location is selectable]. Additionally, such technology may be used to *construct only non-barrel portions* of bat (10), such as the handle section or the label section. And in some embodiments, each *portion can be disposed in a different section* (handle, label and barrel) than the other portion. In yet other embodiments, at least one portion can extend into two of the bat's sections (handle, label, barrel) while another portion can extend into the same two of the different sections or only one other section, either wholly or partially. [Applicants' application: Page 13, L14 – Page 14, L1] [emphasis added]

Thus, the specification clearly teaches that the size, density of material, and the location of a bat portion may be selected to yield a bat having a desired (i.e. predefined) weight distribution. Thus, the specification teaches that a bat's center of mass may be positioned as desired with the only limits being those imposed by the laws of physics. For example, one of ordinary skill in the art would realize that a bat's center of mass could not be positioned at the extreme barrel end of a bat. Restated, there are certain well known physical limits for positioning the center of mass of a bat (or any object) and such limits would be known by those of ordinary skill in the art. What the Applicants' teach and claim is how to strategically position a bat's center of mass between two predefined points, the selection of which is restricted only by such physical limits.

Indeed, as shown in Fig. 10, it is possible for a bat constructed according to the disclosed teachings to have a plurality of bat portions that may vary in size, location and density to engineer the sweet spot zone.

Conventional prior art solid wood bat designs afford little opportunity to vary the location of a bat's CM without altering the shape of the bat as the length/weight properties of conventional prior art solid wood bats are coupled. . . . In contrast, using the disclosed technology to engineer the location of a bat's sweet spot zone, a variety of bats can be manufactured giving a batter a choice as to which bat attributes are more important based on such batter's anticipated swing and the pitcher's anticipated pitch. *The disclosed technology decouples a bat's length/weight properties, thereby allowing the bat's CM to be positioned at various locations along the bat.* [Applicants' Application: Page 24, L8 –L 17] [emphasis added]

As noted in the specification, embodiments of the Applicants' invention allow a solid bat's length/weight properties to be decoupled, an attribute typically only found in hollow bats such as aluminum bats. The specification further defines the term "sweet spot zone" as follows:

From the above example, those of ordinary skill in the art would understand that the bat/ball contact point that maximizes hit ball speed is between the bat's CM and the barrel end (22) of the bat. Such a point along a bat where maximum hit ball speed is achieved is referred to as the center of the bat's "sweet spot zone." The sweet spot zone is generally defined as the area on a racket, club, bat, or paddle where hits are most effective. For a bat, the sweet spot zone is a region on the surface of a bat that is moving with a given momentum and most effectively transfers such momentum to a hit ball. More particularly, the sweet spot zone includes a point of contact (for a ball having a given trajectory and momentum) on the bat's surface that is moving with a moment of inertia and maximizes energy transfer from bat to ball. [Applicants' Application: Page 24, L8 –L 17] [emphasis added]

Thus, in summary, the application provides the following teachings:

- That a principal object of the invention is to provide solid laminated bats having the well-known handle/barrel shape, but with a variety of *pre-selected* weight distributions;
- That to achieve the above describe object of the invention, a veneer bat is constructed having a plurality of bat portions constructed from a plurality of materials having different densities and selecting the location of such portions;
- That the disclosed technology decouples a bat's length/weight properties, thereby allowing the bat's center of mass to be positioned at various predefined locations along the bat while maintaining a particular bat shape (length and size).
- The specification provides a definition of the term "sweet spot zone";
- The specification provides teachings as to how the "sweet spot zone" is linked to a bat's center of mass and how to position the sweet spot zone by selecting the position of at bat's center of mass.

- The specification even provides a picture of one exemplary embodiment having a plurality of bat portions (Fig. 10) and teaches how to vary such a bat's weight distribution by selecting the density of a first portion (for example), the density of a second portion, the location of a first portion, and the location of a second portion to provide for a bat having a center of mass (and thus, sweet spot zone) located at a desired (i.e. predefined) location.

Thus, Applicants' respectfully submit that the specification does convey with reasonable clarity to those skilled in the art that, as of the filing date sought, the Applicants' were in possession of the invention as now claimed.

35 U.S.C. §103, Anticipation Rejection: Claims 1-4, 6, 7, 13-16, and 18

Claims 1-4, 6, 7, 11-16, and 18-20, 24, 32, and 33 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bender et al. 6,007,440 in view of Smith 1,706,680.

The Applicants' respectfully traverse the grounds for rejection of claims 1-25, 32, and 33 and submit the following arguments.

As noted above, independent claims 1 and 13 were previously amended to add the limitation requiring the claim 1 and 13 inventions to be constructed of at least two different types of material; a feature not found in the base reference Bender et al. '440. It is respectfully submitted that none of the remaining references cited in the Office Action cure such deficiency in the base reference Bender et al. '440. As is well known, "obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under section 103, teachings of references can be combined only if there is some suggestion or incentive to do so."³ (emphasis original) Indeed, "virtually all inventions are necessarily combinations of old elements. The notion, therefore, that combination

³ Graham v. John Deere Co., 381 U.S. 1, 148 U.S.P.Q. 459 (S. Ct. 1966)

claims can be declared invalid merely upon finding similar elements in separate prior patents would necessarily destroy virtually all patents and cannot be the law under the statute, ' 103."⁴ Consequently, "the task of the Patent Office is essentially a burden of proof not just to show prior patents with selected elements similar to respective parts of a claimed combination, but to show teachings to support obviously combining the elements in the manner claimed."⁵ "[S]implicity and hindsight are not proper criteria for resolving the issue of obviousness."⁶

The Examiner contends that the Bender et al. bat would inherently have a "sweet spot zone" or "center of mass" between two predefined points. Such is true for any bat with exception to the word "predefined" in light of the Applicants' teachings. It is respectfully submitted that the Applicants' do not claim to have been the first to invent a bat having a sweet spot zone or center of mass. The first bat made and every bat since has indeed had a sweet spot zone and a center of mass. Thus, clearly the Bender et al. bat will have a "sweet spot zone" and a "center of mass", but not between two predefined points as claimed by the Applicants'.

The Applicants' novel technology relates to a veneer bat comprising a plurality of bat portions constructed from a plurality of wood types wherein the density of said first portion, the density of said second portion, the location of said first portion, and the location of said second portion are selected to provide for a bat having a center of mass (CM) located between a predefined first-point and a predefined second-point thereby forming a solid laminated bat having a variety of pre-selected weight distributions. Indeed, the Applicants' technology can be used to *decouple* a bat's length/weight properties, thereby allowing the bat's CM to be positioned at various locations along the bat. Restated, while increasing the length of some embodiments of the Applicants' bat will have an effect on the bat's weight distribution, such an effect will not be a "linear" effect as it is

⁴ Panduit Corp. v. Dennison Manufacturing Co., 1 U.S.P.Q. 2d 1593, 1603 (Fed. Cir. 1987; footnotes omitted).

⁵ ACS Hospital Systems, Inc. v. Montefiore Hospital, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984).

⁶ Ex parte Clapp, 227 U.S.P.Q. 972, 973 (PTO Bd. App. 1985).

with prior art bats. Changes in weight distribution of such prior art bats is accomplished by either changing the size, length (shape) of the bat. In contrast, the weight distribution of the Applicants' can bat be changed without changing the length of the bat or the shape of the bat.

For example, the Applicants' teach that the bat portions may be different in length and width and height [i.e. difference sizes], and such barrel portions may or may not be adjacent to each other [i.e. the location is selectable]. Additionally, such technology may be used to construct only non-barrel portions of bat (10), such as the handle section or the label section. And in some embodiments, each portion can be disposed in a different section. Neither Bender et al. nor Smith provide for such a bat or make such a bat obvious as all their bat portions run the full length of the bat.

Indeed, as described below, Bender et al. teaches away from the Applicants' invention. First, Bender et al. teaches constructing a bat using only one type of wood and TESTING each individual piece of wood so that a bat may be constructed using more dense wood in areas where the ball normally strikes the bat. Restated, all Bender et al. teach is to use a different quality of wood in the area where the bat normally strikes a ball. In contrast, the Applicant's invention requires no testing of the wood to construct a bat having more dense wood in area where the ball normally strikes the bat. Second, Bender et al. provide no teachings relating to selecting various bat properties so as to strategically position the bat's sweet spot zone as claimed by the Applicants.

Smith teaches a "laminated" bat (not veneer) comprised of two different types of wood. Smith teaches that a bat constructed according to his teachings is "exceedingly strong and durable, yet light and well balanced." Smith provides no teachings as to how the "balance" of the Smith bat is achieved, just that the bat is "well balanced" as were bats before Smith using non-Smith

technology. Smith certainly does not teach a bat where the bat's weight distribution is decoupled from its length as described above.

For at least this reason it is respectfully submitted that the Applicants' claimed invention is patentable over the references cited.

In addition, it has been respectfully submitted that none of the secondary references suggest nor do they provide motivation to combine the teachings of the various secondary references with the Bender el al. teachings to achieve the Applicants' claim 1 and 13 inventions. It is respectfully submitted, therefore, that none of the cited secondary references overcome the above identified deficiency in the base reference.

The remaining depend claims simply add further patentably distinguishable features to the claim 1 and 13 inventions. For at least these reasons, Applicants respectfully traverse the above identified 103 rejections and submit that the rejected claims are in condition for allowance.

Claims 19 and 20

Regarding claims 19 and 20, the Examiner concedes that Bender el al. does not teach the claimed thickness for the lamina used to construct the outer portions of the bat but that Bender et al. does teach that "inner lamina are of the claimed thickness." The Examiner contends that "it would have been obvious to one of ordinary skill in the art to have used the same thickness when constructing Bender's alternate embodiment bat to simply the step of cutting the lamina." As noted above, it has been well established by the Courts that "simplicity and hindsight are not proper criteria for resolving the issue of obviousness"⁷ For at least this reason Applicants respectfully submit that the above identified 103 rejection is improper and submit that the rejected claims are in condition for allowance.

⁷ Ex parte Clapp, 227 U.S.P.Q. 972, 973 (PTO Bd. App. 1985).

Claims 5, and 17

Claims 5 and 17 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bender et al. 6,007,440 in view of Smith 1,706,680 and Cook 4,714,251.

As noted above, “obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under section 103, teachings of references can be combined only if there is some suggestion or incentive to do so.”⁸ (emphasis original) Indeed, “virtually all inventions are necessarily combinations of old elements. The notion, therefore, that combination claims can be declared invalid merely upon finding similar elements in separate prior patents would necessarily destroy virtually all patents and cannot be the law under the statute, ‘103.’”⁹

Cook teaches a bat comprising three sections formed of different types of wood laminated together as described below:

The bat of this invention is formed of three distinct portions laminated to form the bat. The handle section of the bat is formed of light wood such as white ash. The center or intermediate bat portion is formed of heavy wood such as hickory. The barrel end of the bat is formed of a soft wood such as soft maple, or other softwoods, as serves to reduce the shock of the bat handle while reducing slide-off spin of a ball which is hit on the barrel end. [Cook 4,741,251: C1, L22-30]

Cook does not teach selecting the position of the different layers so as to position the center of mass between two predefined points. Cook teaches a bat, not veneer, having different sections (not veneer) apart from each other to reduce shock and slide-off spin. It has not shown where Cook provides the motivation to combine Cook teachings with Bender et al. and Smith to yield the Applicants’ claimed invention. It is respectfully submitted that simply linking together multiple references containing similar features of the Applicants’ claimed invention, without more, is not a

⁸ Graham v. John Deere Co., 381 U.S. 1, 148 U.S.P.Q. 459 (S. Ct. 1966)

⁹ Panduit Corp. v. Dennison Manufacturing Co., 1 U.S.P.Q. 2d 1593, 1603 (Fed. Cir. 1987; footnotes omitted).

proper bases for a 103 rejection. For at least this reason Applicants respectfully submit that the above identified 103 rejection is improper and submit that the rejected claims are in condition for allowance.

Claims 32 and 33

The examiner contends that claims 32 and 33, absent a showing of unexpected results, the exact location of the “sweet spot zone” or “center of mass” would obviously have been up to the ordinarily skilled artisan depending on the particular bat characteristics desired by the batter.

As noted above, it is respectfully submitted that the Applicants’ do not claim to have been the first to invent a bat having a sweet spot zone or center of mass. The first bat made and every bat since has indeed had a sweet spot zone and a center of mass. However, using prior art teachings related to bats, and as described in detail above as well as in the Applicants’ specification, prior art solid veneer bat designs for solid bats are limited because the weight distribution of the bat is coupled to the length of the bat. Thus, any change in weight distribution is accomplished by either changing the size or length (or shape) of the bat.

In contrast, the weight distribution of the Applicants’ bat can be changed without changing the length of the bat or the shape of the bat. Consequently, it is respectfully submitted that for at least this reason claims 32 and 33 are patentable over the cited prior art references. However, claims 32 and 33 have been canceled to remove issues related to such claims from consideration in hopes of expediting the examination process.

Based on the above arguments, Applicants respectfully request favorable action and withdrawal of the present rejections for all claims. The Examiner is invited to call the undersigned

at his convenience to resolve any remaining issues. Please charge any additional fees required by this Amendment to Deposit Account No. 503176.

Respectfully submitted,

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